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CENTRAL INTELLIGENCE AGENCY

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5. When the war started, the factory stopped this production (during the war production of all calculating machines was completely stopped at all factories) and began to produce for defense. At that time the director was N. L. Nezimov.
6. The factory received the designation Factory No. 828 of the People's Commissariat for Mortar Armament and started production of Shpagin machine carbines, abbreviated PPSH, and known by troops at the front as Avtomat. Weight of this machine carbine was about 3.5 kg. without magazine; weight of magazine without cartridges: 1.1 kg. Production was quickly organized and was gradually mechanized. Assembly lines were installed, and the machine carbines were mass-produced. Mechanization enabled newly-engaged young workers to master the comparatively simple production easily; there are only about 80 different parts in the machine carbine. The machine carbines were the first at the factory range.
7. The Ministry for Armaments on several occasions praised the good work of the factory, and at the end of the war the factory was awarded the Order of the Patriotic War 1st Class. Since then the name of the factory has been preceded by the words Order of the Patriotic War First Class.
8. From the end of the war until 1946, while the Government was working out a peacetime program, the factory was in a transitional state. During this period various articles, mainly for agriculture, and consumer goods, including large numbers of locks and padlocks, were produced.
9. The program for the factory was ready in August 1945. The production planned for the first two years of the post-war Five Year Plan differed entirely from the pre-war production. According to this program the factory was to produce:
 - a. Calculating machines (Arifmometr), which had not previously been produced by the factory. Just before the war the factory planned to start production of calculating machines and had even assembled 700 such machines from finished parts obtained from the Moscow factory i/n Dzerzhinski, which produced calculating machines. The outbreak of war, however, stopped the preparations for this production.
 - b. Typewriters, which had not previously been produced by the factory.
 - c. Small machine tools of great precision for the clock industry, also not previously produced.
 - d. Spare parts for agricultural machinery and consumer goods.
10. According to the program, the output of calculating machines was to be on a large scale by the end of 1945, and the production of typewriters was to start in the middle of 1946. But owing to the shortage of specialist engineers, foremen, workers, and special equipment, including special tools, large numbers of dies, and appliances, it was found difficult to carry out this program. For this reason, production of all these articles was greatly delayed. Preparations for the production of typewriters were protracted for nearly a year beyond the date planned, and actual production began only in April 1947.
11. At that time the factory was called Factory for Calculating Machines and Typewriters. Since the middle of 1949, however, the factory has been called Factory for Calculating, Analytical, and Typewriting Machines.
12. In 1949 the factory began to produce punches (Perforator) and a little later other machines for mechanized accounting stations (Stantsiya Mekhanizirovannogo Ucheta).

Type of Article ProducedCalculators

13. The calculating machine (Arifmometr) produced is the Feliks of lever type (rychaznyy tip) for multiplication and division in calculations of small volume. It is a fairly simple machine with about 860 parts. Before the

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war Feliks calculating machines were produced on a large scale by the Calculating Machine Factory i/n Dzerzhinski, 22 Sushchevskaya Ulitsa, Moscow, which also produced other calculating machines and various measuring devices (schetchnik).

14. In 1949 the factory produced an experimental series of modernized Feliks lever calculating machines and in February 1950 started regular production of the machines. Engineer-designer A. I. Khokhlov was responsible for the modernization. This modernized type can multiply and divide nine-figure numbers by nine-figure numbers and obtain a result of which nine figures are correct and the remainder according to the general rules of approximate calculations. The machine embodies certain improvements which simplify its operation.

Machine Tools for the Clock and Watch Industry

15. Production started in 1946. The first machine tools made were of the S-79 type for boring jaw clutches (rastochka kulachkovoi mufty) for Pobeda clocks. Machine tools of about 15 types (types S-2, S-9, S-27, S-38, S-44, etc.) were produced. This was the first time that these miniature machine tools for the clock industry were produced in the USSR. Formerly they had to be manufactured in Switzerland. The machine tools produced are of small size and great precision, and each tool has its own small electric motor. Automatic screw-cutting lathes, combined milling machines, and boring lathes are also produced.

Typewriters

16. The first typewriters were produced in April 1947 and were of the ordinary Moskva type, with large carriage and two-color ribbon. Number of parts were about 2,560.
17. At the beginning of 1949 production was started of typewriters with Russian and Latin characters. A large number of parts of this machine are identical with those of the standard Moskva type.
18. In the middle of 1950 the first experimental Stenograf machines were produced.
19. Portable Moskva typewriters with small carriage are produced by another Moscow factory, of Local Industry. The director is Nuzinov (fnu).

Tabulators and Other Calculating and Analytical Machines

20. The factory started to produce tabulators of the T-4M type, which had been produced before the war, at the end of 1948 when serial production began.
21. In the middle of 1949 production started of modernized 45-column tabulators with a device for punching the total. This type was designated T-4 M I. It has about 56,000 parts of 1,750 different names. It weighs about 700kg.
22. In 1949 punches of two types were produced in series:
 - a. Total one-stage (Itogovy Odnoperiodny) punch of type PI45-1 (Perforator Itogovy 45-Kolonnny).
 - b. Two-stage punch of type PD 45-1 (Perforator Dvukhperiodny 45-Kolonnny).
23. In the middle of 1950 the factory began to prepare for the production of more complicated calculating and analytical machines, designed and developed by designers of the Nischetmash (Nauchno-Issledovatel'skiy Institut Schetnykh i Matematicheskikh Mashin -- Scientific Research Institute for Calculating and Mathematical Machines). These are 80-column machines.
 - a. The T 80-1 tabulator has already been built at the factory and has passed complete tests. It is intended for operations with punched cards (cards with holes in which the holes correspond to various figures according to a special system) and is an electromechanical automatic calculating machine. By means of special adjustment it can add, subtract, and give the result of the total of cards. In an average of one minute it

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can produce the totals of 140 punched cards. Weight: about 795 kgs. Dimensions: length - 1,380 mm; width - 810 mm; height - 1,050 mm. 110 volt dc motor with 850 rpm and 175 volt motor with 1,750 rpm. About 50 percent of the parts of the T 80-1 tabulator are identical with those of the T-4 M I.

- b. Punches are to be produced of the P 80-2 type for the preparation of punched cards by punching holes in corresponding places. The magazine for the cards takes about 450 cards. Weight of P 80-2: 155 kgs. Dimensions: length - 980 mm; width - 450 mm; height - 840 mm. Ac motor.
- c. It is possible that the factory will also produce control apparatus (Kontrolnik) of the K 80-1 type for the control of punches, weight: about 16 kgs, and a sorter (Sortirovka) of the S 80-1 type for sorting punched cards into groups, weight: about 400 kgs; length: 1,450 mm; width: 450 mm; height: 1,150 mm.

Consumer Goods

24. Production started at the end of 1945. From that time until now the principal constant production of consumer goods has been padlocks of Zenix type and internal door locks of Moskva type.
25. Other consumer goods are also produced but in comparatively small numbers. A fairly large number of parts for agricultural machinery are produced; sometimes there are orders for 100,000 parts.

Special Machine Tools for the Factory's Own Use

26. Every year the factory produces a small number of special machine tools for its own use in the machine shop.

Output

27. Calculating Machines: The first calculating machines were produced in January 1946. Output for the first half-year was as follows:

January	1946-	600
February	"	800
March	"	1,000
April	"	1,400
May	"	1,400
June	"	1,800
		<u>7,000</u>

Total Output

1946: about 18,000
 1947: about 26,000
 1948: about 32,000
 1949: about 41,000
 1950: about 48 - 50,000 will be produced.

28. Machine Tools for the Clock and Watch Industry: The production of machine tools for the clock and watch industry was as follows:

1946: about 100 tools of various types
 1947: slightly more than 100 tools
 1948: about 120 tools
 1949: about 130 tools
 1950: about 145-150 will be produced.

29. Typewriters: Production started in April 1947 with an output of 32 typewriters; in May output was 94 and in June, 130.

Total Output

1947: about 2,000
 1948: about 8,000
 1949: about 13,000
 1950: about 17 - 18,000 (estimated)

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30. Tabulators: Output was as follows:

Tabulators in 1949: 115
 Total one-stage punch machines in 1949: 22
 Two-stage punch machines in 1949: 46

31. Consumer Goods: In 1946 monthly output was about 7,000 locks. Later on output slightly increased and at present is 10-11,000 locks per month.
32. Special Machine Tools for Factory's Own Use: In 1949 about 26 machine tools were produced for the factory's own use. In 1950 about 30 such tools will be produced.

Personnel

33. Some of the chief personnel are:

- a. Director: Lesechko, M. A., who replaced Khrenov at the end of 1948.
- b. Chief Engineer: Vorobiyev, A.
- c. Chief Technologist: Margulis, A.

34. About 2,800 people are employed in two shifts of eight hours each. There is a third (night) shift, with a small number of employees for the maintenance of equipment and the preparation of materials and tools for the morning shift.

35. Installations

- a. Typewriter Shop, the largest shop of the factory. Chief: Gavrilov. The shop has been awarded the title of Stakhanov Shop.
- b. Calculating Machine Shop (Tsekh Arifmometrov). Chief: Kremenskov. Awarded title of Stakhanov. In the first half of 1946 this shop was already working satisfactorily with two conveyer belts and 160 units of new equipment. 380 men underwent special training for the production of calculating machines. At the present time the shop has 235 machine tools and other units of equipment.
- c. Tabulator Shop (Tsekh Tabulyatorov). Chief: Fedotov. Shop awarded title of Stakhanov. In the middle of 1947 the Glavvoligrafmash of the Mashzoriobor Ministry ordered the factory to start organizing shops for the production of calculating and analytical machines. In 1948 a shop was organized, and the factory executed several orders for the repair of tabulators.
- d. Machine Tool Construction Shop. Chief: Vdovenkov. Shop awarded title Stakhanov. Shop for the production of machine tools for the clock and watch industry.
- e. Consumer Goods Shop. Chief: Gorelkin. Shop awarded title Stakhanov. Superficial area: about 300 sq m. Equipped with 32 machine tools.
- f. Machine and Assembly Shop (Mekhano-Sbornochny Tsekh). Chief: Bereslavski.
- g. Automatic Turret Lathe Shop.
- h. Press Shop.
- i. Tool Shop.
- j. Electroplating Shop.
- k. Varnish Shop.
- l. Thermic Shop.
- m. Machine-Repair Shop (Remontno-Mekhanichesky Tsekh).
- n. Stamping Shop.

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- c. Foundry Shop. Established in 1948. Until then castings had been received from the Klimovsk Textile Machinery Factory and the Podolsk Engineering Works i/n Kalinin. At the present time many parts are produced by die casting (litiye pod davleniyem). The equipment (Machine 511) came from the Krasnaya Presnya Works.
- p. Three laboratories.

Miscellaneous

36. It is probable that the whole factory will shortly be awarded the title of Stakhanov Factory.
37. The factory newspaper is Krasnaya Znaniya.
38. Stakhanov courses have been opened at six different shops for the training of workers in Stakhanov methods of work.
39. In August 1950 12 specialists (three engineers, foremen, and specialist workmen) from the Podolsk Engineering Works i/n Kalinin visited the SAM Factory to study the production of typewriters, as it is planned that the Podolsk Engineering Works should start production of typewriters at the beginning of 1951 in addition to its present production. The Podolsk Works is already partly acquainted with typewriter production, as for several years after the war it supplied castings for typewriters to the SAM Factory.

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